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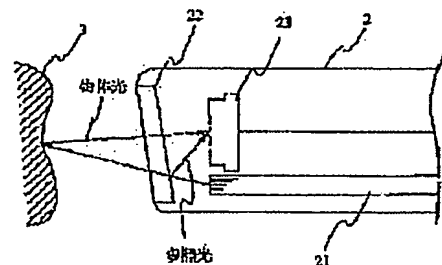
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(54) STEREOSCOPIC ENDOSCOPE

(57) Abstract:

PURPOSE: To inexpensively constitute a stereoscopic endoscope capable of realizing stereoscopic observation and making the diameter of an insertion part smaller.

CONSTITUTION: A light guide 21 transmitting a laser beam supplied from a light source device is disposed inside the insertion part 2, and a part of the laser beam transmitted through the light guide 21 irradiates an observed part 3 through a beam splitter 22 at the tip of the insertion part 2. Returning light from the observed part 3 is made incident through the beam splitter 22 again and formed into an image on the light receiving surface of a CCD 23. A part of the laser beam transmitted through the light guide 21 is reflected by the beam splitter 22 and



projected to the light receiving surface of the CCD 23 as reference light, and interference fringes (optical holography) is generated on the light receiving surface of the CCD 23 by object light being the returning light and the reference light. The CCD 23 image-picks up the interference fringe and outputs an electrical signal in accordance with the intensity distribution of the interference fringe to a signal processor.